

Name _____ Period _____

Study Guide: Matter

To answer the following questions, use your “Matter,” “Mass and Volume,” and “Density” notes to help you.

1. Anything that takes up space and has mass is called _____.
2. A measure of the amount of matter in an object is called _____, and a measure of the space taken up by matter is called _____.
3. Mass is measured in what metric units?
4. When measuring VOLUME, which metric units would be most appropriate for the following SOLIDS:

Your science book _____ Your house _____
5. When measuring VOLUME, which metric units would be most appropriate for the following LIQUIDS:

Water in a water tower _____ Pop in a pop can _____
6. _____ have definite shape and volume, _____ have no definite shape or volume, and _____ have definite volume but no definite shape.
7. _____ have particles with the most kinetic energy, and _____ have particles that are closely packed together.
8. _____ measures the force of gravity, but _____ measures the amount of matter in an object.
9. When measuring volume, 1mL = _____.
10. What is the equation used to calculate density?
11. An attribute that can be used to help identify an object is called a _____ property. It is not affected by the amount or shape of a substance! An example would be density.

To answer the questions below, use your practice problems and labs to help you.

12. The density of 50g of water is _____. The density of 25mL of water is _____. The density of 100mL of water is _____. The density of 100g of water is _____. The density of a drop of water is _____. The density of a pot of water is _____.

13. Calculate the **volume** of a block with the following dimensions: (Be sure to show your work and include units)

Length = 1 cm Width = 2 cm Height = 6 cm

14. Calculate the **density** of an object with the following mass and volume: (Be sure to show your work and include units)

Mass = 20 g Volume = 5 cm³

15. Calculate the **density** of a block with the following mass and dimensions: (Be sure to show your work and include units)

Mass = 45 g Length = 1 cm Width = 3 cm Height = 5 cm

16. Explain step by step the procedure you would use to find the mass of 50mL of water.

17. If you do not know the identity of a substance, what property could you examine to determine its identity?

18. Explain step by step the procedure you would use to find the density of an irregularly shaped object.

19. How do you know if an object will float in water?

20. How do you know if an object will sink in water?